Docket No. 50439-2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

RECEIVED CENTRAL FAX CENTER

APPLICANT:

Barstad et al.

FEB 1 3 2004

SERIAL NO.

09/605,442

GROUP:

1741

, ...

FILED:

June 28, 2000

EXAMINER: W. Nicholas

FOR:

ELECTROLYTIC COPPER PLATING SOLUTIONS

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

DECLARATION UNDER 37 CFR 1.131

The undersigned declare as follows:

- 1. We are co-inventors of the above-identified patent application ("the patent application") assigned to the Shipley Company.
- 2. Prior to January 11, 1999, we conceived of, made and used electrolytic copper plating compositions that contained at least one copper salt, an electrolyte, and one or more brightener compounds in amounts greater than 1.5 mg per liter of the plating composition. Brightener compounds used in those electrolytic copper plating compositions prior to January 11, 1999 included compounds that had a molecular weight of less than 1000 and compounds having sulfide and sulfonic acid groups. Prior to January 11, 1999, using such electrolytic copper plating compositions, we electrolytically deposited copper onto semiconductor wafers that contained microvias and trenches,
- 3. Attached as Exhibits 1 and 2 are true and accurate copies of laboratory notebook records (notebook pages 22 and 23 respectively), with dates deleted, of such actual work discussed in paragraph 2 above and completed prior to January 11, 1999. For instance, those Exhibits 1 and 2 disclose use of a copper electroplating composition identified as Nanoplate